

BARKOV, N.K.; SMIRNOV, I.N., redaktor; VORONETSKAYA, L.V., tekhnicheskiy  
redaktor.

[Automatic equipment of water turbines] Avtomaticheskie ustroistva  
gidroturbin. Moskva, Gos. energ. izd-vo, 1954. 254 p. (MLRA 7:12)  
(Hydraulic turbines)

BARKOV, N.K., inzh.

Hydraulic lift with series-connected servomotors. [Trudy] LMZ no.4;  
383-385 '57. (MIRA 11:4)  
(Hydraulic machinery) (Servomechanisms)

BARKOV, N.K.

15(6)

PHASE I BOOK EXPLOITATION

SOV/2200

Astaf'yev, Vladimir Aleksandrovich, and Nikolay Kuz'mich Barkov

Gidroturbiny i ikh obsluzhivaniye (Hydraulic Turbines and Their Maintenance)  
Moscow, Gosenergoizdat, 1958. 300 p. Errata slip inserted. 4,700 copies  
printed.

Ed.: A. M. Lokshin; Tech. Ed.: Ye. M. Soboleva.

PURPOSE: This is a textbook for hydraulic turbine maintenance personnel. It may also be useful to students of technical schools which train technicians for turbine departments of hydroelectric power stations.

COVERAGE: The book presents basic operating principles for high-power hydraulic turbines and auxiliary equipment. Designs of hydraulic turbines and operational and maintenance procedures are described. Problems dealing with the inspection and repair of hydraulic turbine installations are also briefly discussed. Chapters I, II, IV, XI, XIII, XIV, and XV were written by V. A. Astaf'yev. Chapters III, V, VI, VII, VIII, IX, X, and Sections 46, 47, 60, and 64 were written by N. K. Barkov. No personalities are mentioned. There are 32 references, all Soviet.

Card-1/8

POLUSHKIN, Nikolay Petrovich; BARKOV, N.K., retsenzent; ZUBOV, I.N.,  
red.; SOBOLEVA, Ye.M., tekhn.red.

[Assembly, adjustment, and testing of automatic speed  
regulators for the hydraulic turbines] Montazh, nelaadka i  
ispytanie avtomaticheskikh reguliatorov skorosti gidroturbin.  
Moskva, Gos.energ.izd-vo, 1959. 201 p. (MIRA 13:2)  
(Hydraulic turbines)

FITERMAN, Yakov Filippovich; BARKOV, N.K., red.; ZHITNIKOVA, O.S.,  
tekhn. red.

[Assembly and maintenance of hydraulic turbines] Montazh i  
remont gidroturbin. Izd.2., perer. i dop. Moskva, Gos. energ.  
izd-vo, 1961. 553 p. (MIRA 15:3)  
(Hydraulic turbines—Maintenance and repair)  
(Hydroelectric power stations)

BARKOV, N.K., inzh.

Characteristics of the regulator for a hydraulic turbine of the  
R0-40 type. Energomashinostroenie 8 no.2:39-42 F '62.  
(MIRA 15:2)  
(Governors (Machinery)) (Hydraulic turbines)

BAIKOV, N.K., inzh.

Review of A.E. Zhmud's book "Screw pump with cycloidal engagement."  
Energomashinostroenie 9 no.12:31, 48 D 63. (MIRA 17:1)

BARKOV, N.K.; TIMME, V.A., doktor tekhn. nauk, retsenzent

[Automatic control of heavy-duty hydraulic turbines]  
Avtomatizatsiya moshchnykh gidroturbin. Moskva, Mashinostroenie, 1964. 254 p.  
(MIRA 17:12)

BARKOV, N.K.

Quantitative analysis of combined effects of drugs. Farm. i zoks.  
27 no.1:91-94 Ja-F '64. (MIRA IV:11)

1. Laboratoriya chastnoy farmakologii (rav. - deyestvitel'nyy chlen  
AMN SSSR prof. V.V. Zakssov) Instituta farmakologii i antimicroterapii  
AMN SSSR.

BARKOV, N.K., Smsh.

Auxiliary equipment for hydraulic turbines, during reconditioning  
11 no. 3336-39 Mr '65. (NIRA Recd)

ASTAF'YEV, Vladimir Aleksandrovich; BARKOV, Nikolay Kuz'mich;  
VAYTS, V.M., red.

[Hydraulic turbines and their maintenance] Gidroturbiny i  
ikh obsluzhivanie. Moskva, Energiia, 1965. 352 p.  
(MIRA 18:9)

BARKOV, N.K.; KРИVOPALOV, V.A.

Automatic device for developing conditioned response. Biul.  
eksp.biol. i med. 59 no.5:114-117 '65.

(MIRA 18:11)

1. Laboratoriya farmakologii nervnoy sistemy (zav. -  
deystvitel'nyy chlen AMN SSSR - prof. V.V.Zakusov) Instituta  
farmakologii i khimioterapii AMN SSSR, Moskva. Submitted  
November 22, 1963.

BARKOV, N.K., inzh.

Ejection of water from the runner chamber in the conversion  
of the hydraulic unit to operation as a synchronous  
compensator. [Trudy] LMZ no.10:315-326 '64.

(MTA 13:12)

USSR/Pharmacology and Toxicology. Adrenergics

V-5

Abs Jour : Ref Zhar - Biol., No 10, 1953, № 47211

Author : Barkay M.M.

Inst : -

Title : Redergan Therapy in Hypertension

Orig Pub : Klinich. meditsina, 1957, 35, № 3, 88-93

Abstract : Ninety-four patients with hypertension, 6 with coronary insufficiency, 11 with spastic migraine, and 2 with endocarditis obliterans were treated with Redergan (ethansulfonate dihydroergot mine). Redergan was introduced intramuscularly starting with a single dose of 1:1. (1 mg.), and gradually increasing the dosage to 12-15 ml. per 24 hours. The treatment lasted 10-20 days and ended with a gradual decrease of dosage. The decrease of blood pressure was observed in 30 patients out of 34, averaging 20 to 23 mm. of mercury; in the part of the patients it returned to normal. Redergan is more effective in the neurogenous

Card : 1/2

BARKOV, N.N., inzh.

Photoelectric analysis of carbon in boiler fly ash.  
Energetik 8 no.7:11-13 J1 '60. (MIRA 13:8)  
(Fly ash)

BARKOV, N.N., kandidat ekonomicheskikh nauk.

Evaluating the efficiency of mixed railroad and waterway transportation. Trudy TSNII MPS no.120:4-19 '56. (MLRA 9:12)  
(Inland water transportation) (Railroads--Freight)

BARKOV, N.N., kand.ekon.nauk, red.; PANOV, V.I., red.; BOBROVA, Ye.N.,  
tekhn.red.

[Combined railroad and water transportation] Smeshannye zhelezno-dorozhno-vodnye perevozki. Pod chshchey red. N.N.Barkova. Moskva, 1958. 166 p. (MIRA 11:4)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut zhelezno-dorozhnogo transporta.  
(Railroads--Freight) (Shipping)

AUTHORS:

Barkov, N. N., Engineer, Korogoda, L. V., Engineer  
SOV/110-53-10-8/10

TITLE:

Level Gauge for Fuel Bunkers (Signalizator urovnya dlya  
bunkerov topliva)

PERIODICAL:

Priborostroyeniye, 1958, Nr 10, pp 21-22 (USSR)

ABSTRACT:

The Ural' branch of the ORGRES devised the gauge equipment  
ESU -57. The indicator is an electronic apparatus operating  
with the germanium layer triode PZV . The triode PZA may  
also be used.

The relay effect in the scheme of the signalizer occurs the  
moment the free end of the crystal triode is connected with  
the collector by way of the substance to be measured. Then  
in the collector - emitter circuit a current occurs the  
amount of which determines the operation range of the current  
vs. voltage characteristics as well as the internal resistance  
of the triode. An electromagnetic relay of the type RSM-2  
operates a signal or it can be connected with an automatic  
filling device.

Card 1/2

The gauge equipment was tested in the coal bunkers of a

Level Gauge for Fuel Bunkers

SOV/119-58-10-8/12

GRES and worked satisfactorily. At the power station mentioned the gauge equipment is combined with an automatic refiller. The gauge equipment may be used in all places where the material to be controlled has a low specific resistance. There are 2 figures.

Card 2/2

KONSTANTINOV, A.R.; KHARCHENKO, K.I.; BARKATOVA, N.R.; BUROV, V.S.

Investigation of evaporation from farm fields. Trudy GGI  
no.91:76-109 :61. (MIRA 14:8)  
(Evaporation)  
(Crops and climate)

BARKHATOVA, N.N.

New outcrop of the Paleocene and lower Eocene in the Mangyshlak Peninsula. Vest.LGU 16 no.24:115-116 '61. (MIRA 14:12)  
(Mangyshlak Peninsula--Paleontology, Stratigraphic)

1. BARKHATOVA, N. N.
2. SSSR (600)
4. Geology
7. Role of the All-Union Geographic Society in the development of geological knowledge.  
Vest. Len. un. ? No. 1, 1952

Presents brief historical sketch of achievements of society during past 107 years in field of geology. States that, up to present, society has never lacked of new scientific ideas.

251T87

9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.

BARKHATOVA N.N.; KUZNETSOV, S.S.

Grigorii Efimovich Shchurovskii; one hundred and fiftieth anniversary  
of his birth. 'est.Len.un.9 no.1:143-154 Ja '54. (MLRA 9:7)  
(Shchurovskii, Grigorii Efimovich, 1803-1884)

BARKHATOVA, N.N.; KUZNETSOV, S.S., professor, redaktor; FROLOV, A.A.,  
redaktor; SMIRNOVA, A.V., tekhnicheskiy redaktor.

[Geological studies of the Russian Geographical Society; 1845-  
1917. Materials on the history of Russian geology] Geologicheskie  
issledovaniia russkogo geograficheskogo obshchestva (1845-1917 gg)  
materialy k istorii otechestvennoi geologii. Moskva, Izd-vo  
Akademii nauk SSSR, 1955. 106 p. (MLRA 8:12)  
(Geographical societies) (Geological research)

BARKHAT OVA, N.N.

Contributions of the Geographic Society of the U.S.S.R. to  
Russian geology. Och.po ist.geol.znan. no.3:45-75 '55.

(MLRA 8:10)

(Russia--Description and travel) (Geographical societies)

BARKHATOV, N.N.

BARKHATOV, B.P.; BARKHATOVA, N.N.

D.L. Ivanov, first Russian explorer of the geology of the Pamirs.  
Trudy Geol. muz. AN SSSR no.1:159-164 '57. (MIRA 11:4)  
(Pamirs--Geology) (Ivanov, Dmitrii L'vovich, 1846-1924)

NEMKOV, G.I.; BARKHATOVA, N.N.

Study of nummulitic fauna in the U.S.S.R. [with summary in English].  
Vest. LGU 13 no.12:49-56 '58. (MIRA 11:12)  
(Nummulites)

NEMKOV, G.I.; BARKHATOVA, N.N.

Nummulites, Assilina, and Operculina of the Crimea and their significance for zonal correlation of Eocene sediments. Izv. vys. ucheb. zav.; geol. i razv. 3 no.5:29-43 My '60. (MIRA 13:11)

1. Moskovskiy geologorazvedochnyy institut imeni S.Ordzhonikidze.  
(Crimea--Foraminifera, Fossil)

NEMKOV, Georgiy Ivanovich; BARKHATOVA, Nina Nikolayevna; KUZNETSOV, S.S.,  
prof., doktor geol.-miner.nauk, otv.red.; IONINA, I.N., red.izd-va;  
SOROKINA, V.A., tekhn.red.

[Nummulites, Assilina, and Operculina of the Crimea] Nummularity,  
assiliny i operkuliny Kryma. Moskva, Izd-vo Akad.nauk SSSR, 1961.  
124 p. (Akademicheskii muzei. Trudy, no.5)  
(MIRA 14:4)  
(Crimea---Foraminifera, Fossil)

"APPROVED FOR RELEASE: 06/08/2000

CIA-RDP86-00513R000203620018-9

BU ALLEGRA, M. J. 1938-1940

BU ALLEGRA, M. J. 1938-1940

APPROVED FOR RELEASE: 06/08/2000

CIA-RDP86-00513R000203620018-9"

BARKHATOVA, N.N.; NEMKOV, G.I.

Zones of large foraminifers in the Eocene sediments of the  
Mangyshlaq Peninsula. Dokl. AN SSSR 155 no. 3:549-551 Mr '64.  
(MIR 17:5)

I. Laboratoriya geologii dokembriya AN SSSR. Predstavleno  
akademikom D.V. Malivkinym.

BARKHATOVA, Nina Nikolayevna; NENKOV, Georgiy Ivanovich; KUZNETSOV,  
S.S., doktor geol.-miner.nauk, prof., otv.red.

[Large Foraminifera of the Mangyshlak Peninsula and the  
northern part of the Aral Sea region and their strati-  
graphic significance] Krupnye foraminifery Mangyshlaka i  
Severnogo Friaral'ia i ikh stratigraficheskoe znachenie.  
Leningrad, Nauka, 1965. 95 p. (MIRA 18:4)

BARKHATOVA, N.N.; NEMKOV, G.I.

Paleocene nummulites of the Mangyshlak Peninsula. Izv. vys. ucheb. zav.; geol. i razv. 7 no.4:48-50 Ap '64. (MIRA 18:3)

1. Moskovskiy geologorazvedochnyy institut im. S.Ordzhonikidze i Geologicheskiy muzey AN SSSR im. A.P. Karpinskogo.

BARKHATOVA, T.P., aspirant

Ovaries in cancer of the uterine cervix. Akush. i gin. 35  
no.3:102-106 My-Je '59. (MIRA 12:8)

1. Iz patomorfologicheskoy laboratorii (zav. - prof.Ye.N.  
Petrova) Instituta akusherstva i ginekologii (dir. - dotsent  
L.G.Stepanov) Ministerstva zdravookhraneniya RSFSR.

(CERVIX NEOPLASMS, physiol.

ovaries (Rus))

(OVARIES, in various dis.

cancer of cervix (Rus))

BARKHATOVA, T. P., Cand Med Sci -- (diss) "Ovaries in cancer of the neck of the uterus. (Clinico-morphological research)." Moscow, 1960. 12 pp; (First Moscow Order of Lenin Medical Inst im I. M. Sechenov); 320 copies; price not given; (KL, 17-60, 167)

BARKHATOVA, T.P. (Moskva)

Spontaneous abortion. Fel'd. i akush. 25 no.6:9-12 Je '60.  
(MIRA 13:9)  
(ABORTION)

BARKHATOVA, T.P.

Premature labor. Fel'd. i akush. 26 no. 5:3-7 My '61.

(PREGNANCY, COMPLICATIONS OF)

(MIRA 14:5)

BUNDIN, Ye.I., fel'dsher (Moskva); BARKHATOVA, T.P., kand.med.nauk

Book reviews. Fel'd. i akush. 28 no.1:60-62 Ja '63. (MIRA 16:7)  
(FIRST AID IN ILLNESS AND INJURY)  
(CHLORPROMAZINE)

BAIKHATOVA, T.P., kand.med.nauk

Obstetric problem no.4. Fel'd. i akush. 28 no.4:50-51 Ap'63.  
(MIRA 16:8)  
(LABOR, COMPLICATED)

BARKHATOVA, T.P., kand.med. nauk

Obstetrical problem no.6. Fel'd. i akush. 28 no.6: 54 Je'63.  
(MIA le:S)  
(OBSTETRICS)

BARKHATOVA, T.P., kand.med.nauk

Hydatid mole; reply to obstetrical problem No.3. Fel'd i  
akush. 28 no.8853-56 Ag'63 (MIRA 1681)

BARKHATOVA, T. V., kand. med. nauk

Pregnancy and labor in patients with congenital microspherocytic hemolytic anemia. Akush. i ginek. 40 no. 5:72-73 S-6 '74. (MIRA 18:5)

I. Nauchno-issledovatel'skiy institut akusnerstva i ginekologii  
(dir. - prof. G. V. Makeyeva) Ministerstva zdravookhraneniya SSSR,  
Moskva.

BARKHATOVA, V. I.

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Solubility of silver bromate in aqueous solutions of potassium bromate and sodium nitrate. The question of effect of electrolytes with common ions on the solubility and solubility product of the precipitate. Yu. L. Le'chuk, L. V. Surnina, and V. I. Barkhatova. *J. Gen. Chem. U.S.S.R.* 25, 1041-6 (1955) (Engl. translation). — See C.A. '50, 53091. B.M.R.

3  
—

LEL'CHUK, Yu.L.; SURNINA, L.V.; BARKHATOVA, V.I.

Selubility of silver bromate in aqueous solutions of potassium bromate and sodium nitrate. Effect of electrolytes with similar ions on the solubility and solubility product of the precipitate. Zhur. ob. khim. 25 no.9:1685-1693 S '55. (MLRA 9:2)

1.Tomskiy politekhnicheskiy institut imeni S.M.Kirova.  
(Solubility) (Silver bromate)

REFREMOV, K. I., BARKHAZOV, V. L., ADAMENKO, I. A.

Determining the gas content in coal seams during exploratory operations in the Kuznetsk Basin. Vop. bezop. i upol'. gash. 1931-1939. (MIR 12.12)

MITTEL'SHTEDT, A.A.; BAUMAN, L.K.; BAREKATOVA, V.P.

Metabolism changes in the relatives of persons suffering from  
hepatocerebral dystrophy. Zhur. nevr. i psich. 68 no.11-12 '65.

(MIRA 18:2)

1. Institut nevrologii (direktor - prof. N.V. Monovalov AMN SSSR,  
Moskva.

BARKHATOVA, V. P.

"New Data on the Stratigraphy of the Upper Paleozoic of the Northern Timan,"  
Dokl. AN SSSR, 32, No.9, 1941

North Geol~~ical~~ Admin.

BARKHATOV, V. F.

"Stratigraphy of the Tiumen Lower Permian," p. 143

Geologicheskiy sbornik, 3, (Collection of Articles in Geology, Vol. 3),  
Leningrad Gostoptekhizdat, 1958, 471pp. (Trudy, vyp 126, Vsesoyuznyy neftyanoy  
nauchno-issledovatel'skiy geologorazvedochnyy institut)

AUTHOR: Barkhatova, V. P. 20-119-5-44/59

TITLE: New Data on the Stratigraphy of the Carboniferous and the Permian Period of North Timan (Novoye v stratigrafii karbona i permi Severnogo Timana)

PERIODICAL: Doklady Akademii Nauk SSSR, 1958, Vol. 119, Nr 5, pp. 999-1002 (USSR)

ABSTRACT: In the largest part of this region the Carboniferous and the Permian Periods are missing; but they are present on its slopes. On the basis of the determined distribution 2 types of cross sections are distinguished: a western and an eastern one. The extent of the Lower and the Middle Carboniferous Periods agrees with the unified scheme of 1951. In the cross sections of North Timan (as well as in the Donbass) the most abrupt change in fauna is observed at the beginning of the Kashirskoye time (according to the above-mentioned scheme). It is just here that choristites with thin ribs, the first Fusulinella in combination with Profusulinella prisca Deprat. and Pr. priscoidea Raus appear. On the basis

Card 1/4

New Data on the Stratigraphy of the Carboniferous and  
the Permian Period of North Timan

20-119-5-44/59

of such a distribution of fauna the scheme of classification given by A. P. Rotay might be preferred to the unified scheme. Further the subdivisions of the stages of the Middle Carboniferous into substages and horizons are described and the differences against hitherto existing opinions (reference 3) are emphasized. In the Permian Period 2 divisions occur. Their extent does not agree with those of the unified scheme. The extent of the lower division is diminished by the exclusion of the Schwagerinen-horizon proper. In contrast to the unified scheme an Ufimskaya stage (reference 2) is separated in the Upper Permian. The western type of section is on the whole characterized by a relative perfection. The individual suites (total thickness about 620 m) are described. The Carboniferous occupies 360 m of them. The Permian is not perfect in the western part, but it is represented by both divisions, about 260 m thick. The Carboniferous and Permian section of the eastern type is different.

Card 2/4

New Data on the Stratigraphy of the Carboniferous and the 20-119-5-44/59  
Permian Period of North Timan

Its total thickness is not more than 275 m. This is caused by the absence of entire or parts of horizons. The thickness of the Lower Carboniferous is here reduced to a quarter of that at the western slope. Of the Permian only the lower division is represented in the east and it is 120 m thick. Summarizing it may be stated that in the Lower Carboniferous period similar conditions of sedimentation prevailed in the entire North Timan region. Later an individualization of the western and the eastern region took place. The development of each of those regions took a different course until the end of the Upper Permian. In the west an uninterrupted and active sedimentation took place. In the east these processes were retarded and were several times interrupted. It was only in the Lower Permian period that the conditions for the sedimentation were favorable here. But also at that time the two regions were considerably isolated from each other. There are 8 references, 8 of which are Soviet.

Card 3/4

New Data on the Stratigraphy of the Carboniferous and the Permian Period of North Timan 20-119-5-44/59

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy geologorazvedochnyy institut (All-Union Scientific Geological Prospecting Research Institute)

PRESENTED: November 25, 1957, by S. I. Mironov, Member, Academy of Sciences, USSR

SUBMITTED: November 25, 1957

Card 4/4

BARKHATOVA, V.P.

Stratigraphy of Carboniferous sediments in the northern Timan  
Ridge. Trudy VNIGRI no.133:185-203 '59. (MIRA 13:1)  
(Timan Ridge--Geology, Stratigraphic)

BARKHATOVA, V.P.

Development of Late Paleozoic Horridonia and Spiriferella in the  
northern Timan Ridge. Trudy VNIGRI no.196, Paleont.sbor.  
no.3:37-47 '62. (MIRA 16:4)  
(Timan Ridge--Brachiopoda, Fossil)

BARKHATOVA, V.P.; STEPANOV, D.L.

Results of the work of the Fifth International Congress  
on Stratigraphy and Geology of the Carboniferous.  
Sov. geol. 7 no.4:147-153 Ap'64. (MIRA 17:5)

"APPROVED FOR RELEASE: 06/08/2000

CIA-RDP86-00513R000203620018-9

14 MAY, 1977: Report from the Ministry of Defense, Moscow, on the  
situation of negotiations between the US and the Soviet Union.

Information of negotiations between the US and the Soviet Union  
on military cooperation in Central America.

(Ref b)

The Institute has been asked to submit a report to AMM/ISSR,  
Moscow.

APPROVED FOR RELEASE: 06/08/2000

CIA-RDP86-00513R000203620018-9"

MITTEL'SHTEDT, A.A.; BAUMAN, L.K.; BARKHATOVA, V.P.

Activity of some enzymes of the blood serum in hepatocerebral  
dystrophy. Vop.med.khim. 11 no.6:30-33 N-D '65.

(MIRA 18:12)

1. Institut nevrologii AMN SSSR, Moskva. Submitted June 2, 1965.

BARKHATOVA, Ye.

Mine committee making efforts to fulfill shift norms. Mast. ugl. 7  
no.11:12-13 N '58. (MIRA 11:12)

1.Predsedatel' shakhtnego komiteta shakhty "Malyy Artem" tresta  
Cheremkhovugel'.  
(Mine management) (Cheremkhovo--Coal mines and mining)

BARKHI, Leonid Davidovich; GIVARTOVSKIY, Lev Aleksandrovich;  
SHAVENDOVA, A.I., red.; MANINA, M.P., tekhn. red.

[ "Zaporozhets" car with small displacement] "Zaporozhets"  
mikrolitrazhnyi avtomobil. Moskva, Izd-vo "Fizkul'tura i  
sport, 1961. 149 p. (MIRA 15:2)  
(Automobiles)

BANDHIL, L.D.

The first Soviet-built tiny automobile with small cylinder capacity  
Avtomobilist 1:70-71 '71. (Mira 1:1)  
(Automobiles--Design and construction)

CHERNYAYEV, M.P.; BARKHIN, G.S.; NIKITIN, A.K.; MOKRISHCHEV, K.K.

Nikolai Mikhailovich Nestorovich; obituary. Usp.mat.nauk 11  
no.4:117-118 Jl-Ag '56.  
(MLRA 9:11)  
(Nestorovich, Nikolai Mikhailovich, 1891-1955)

*BARKHIN, G.S.*

Sources: Mathematical References

\*Cabotarev, N. G., and Mel'nik, N. N. The Routh-Hurwitz Problem for polynomials and entire functions. Appendix by G. S. Barkin and A. N. Horanskii. Real-

Steklov, 26, 331 pp. (1949). (Russian)

Real

The Routh-Hurwitz problem is the problem of finding conditions for the roots of a polynomial to lie in a half plane. This monograph contains two chapters by Cabotarev; one on the original Routh-Hurwitz problem (and generalizations to the case where a specified number of zeros lie in a half plane), and the other on the problem for quasipolynomials, which are expressions of the form  $\sum_{n=1}^{\infty} a_n(z) e^{nz}$  with real  $a_n$  and polynomial  $a_n(z)$ . The rest of the book (except the appendix) is by Mel'nik and deals with generalizations of the Routh-Hurwitz problem to entire functions, with some other results on the zeros of entire functions, and with preliminary material. Much of the material is more or less available in the periodical literature.

The first chapter is an account, mainly algebraic, and partly based on work by Yu. I. Netmark [summarized in Doklady Akad. Nauk SSSR (N.S.) 58, 357-360 (1947); 59, 853-856 (1948); these Rev. 9, 348, 428], of the generalized Routh-Hurwitz problem for polynomials. A final section by Mel'nik treats the Nyquist diagram, also making use of work of Neimark. Chapter 2 contains miscellaneous results from the general theory of functions. Chapter 3 is a concise introduction to the theory of entire functions, general and functions of exponential type in particular.

Mel'nik's principal objective is to generalize the Hermite-Biebler theorem (that the roots of  $g(z) + ih(z)$  are all on the same side of the real axis when  $g(z)$  and  $h(z)$  are polynomials with real coefficients, if and only if the zeros of  $g$  and  $h$  are real and interlacing) and the Hermite determinant criterion. It turns out that the most general class to which the Hermite-Biebler theorem can be extended is the class  $B$  of entire functions  $F(z) = g(z) + ih(z)$ ,  $g$  and  $h$  real on the real axis, with  $\limsup |F'(z)/F(z)| \leq 1$  uniformly in  $z$  as  $|z| \rightarrow +\infty$ .

Bottles! Mathematics! Heavy! Heavy!

1950 TO 1951 No. 1

A large number of theorems concerning analytic and Borel sets are proved, of which the following may be taken as typical. (1) In a compact Hausdorff space satisfying condition (B), every pair of disjoint analytic sets are contained in a pair of disjoint Borel sets. (2) In a compact Hausdorff space satisfying condition (B), an analytic set whose complement is analytic is a Borel set. (3) In a compact Hausdorff space satisfying condition (B), an analytic set is a Borel set if and only if it is representable by means of disjoint summands. (4) Every zero-dimensional compact Hausdorff space which is dense in itself and satisfies condition (B) contains an analytic set which is not a Borel set. (5) If  $X$  is a completely regular space such that  $X$  is an  $F_\sigma$ -set in  $\beta X$ , then  $X$  is an  $F_\sigma$ -set in every compact Hausdorff space containing  $X$  as a dense subspace. (6) Let  $f$  be a continuous mapping carrying a space  $X$  satisfying the hypotheses of (5) into a compact Hausdorff space  $Y$ . Then  $f(X)$  is an  $F_\sigma$ -set in  $Y$ . Finally, generalized notions of Borel operations being replaced by unions and intersections of larger families of sets and a corresponding generalization obtained for the operation (A). Some of the results obtained for ordinary Borel and analytic sets are extended to those more general cases. E. Hewitt (Seattle, Wash.).

BARKHIN, G.S.; FOMEN, V.T.

Bending of surfaces of positive curvature under certain  
boundary conditions. Dokl. AN SSSR 140 no.5:987-989 0  
'61. (MIRA 15:2)

1. Rostovskiy-na-Donu gosudarstvennyy universitet. Predstavлено  
akademikom P.S.Aleksandrovym. <sup>7</sup>  
(Surfaces of **constant** curvature)  
(Boundary value problems)

BARKHIN, G.S.; FOMENKO, V.T.

On the deformation of surfaces of positive curvature with a  
boundary. Sib,mat,zhur. 4 no.1:32-47 Ja-F '63.

(MIRA 16:2)

(Boundary value problems) (Surfaces, Deformation of)

BARKHIN, G.S.; FOMENKO, V.T.

Single-valued definiteness of a piecewise regular surface of positive curvature with a boundary condition. Dokl. AN SSSR 152 no.5:1023-1026 O '63.  
(MIRA 16:12)

1. Rostovskiy-na-Donu gosudarstvennyy universitet. Predstavлено akademikom I.N.Vekua.

L 3683-66 EWT(d)/T IJP(c)

ACCESSION NR: AR5009892

UR/0044/65/000/002/B097/B097

517.948.32:517.544

SOURCE: Ref. zh. Matematika, Abs. 2B400

AUTHOR: Barkhin, G. S.; Usmanov, Z. D.

TITLE: The Hilbert problem for piecewise regular generalized analytic functions

CITED SOURCE: Sb. Issled. po krayevym zadacham teoriy funktsii i differents. uravneniy. Dushanbe, 1964, 113-132

TOPIC TAGS: Hilbert space, mathematical analysis, differential equation, analytic function

TRANSLATION: In the multiply connected region  $D^-$ , bounded by  $m + 1$  simple closed Lyapunov-type curves:  $L = L_0 + L_1 + \dots + L_m$ , of which  $L_0$  contains the rest, and cut along  $n$  simple closed curves:  $\bar{L} = \bar{L}_1 + \dots + \bar{L}_n$ , the following boundary value problem is solved: To find a solution to the differential equation

$$\frac{\partial \bar{W}}{\partial z} + A\bar{W} + B\bar{W}' = 0 \quad (1)$$

(a generalized analytic function), satisfying the boundary conditions

$$\operatorname{Re}[G(t) W^-(t)] = g(t), t \in L, \quad (2)$$

$$W^+(t) = a(t) W^-(t) + b\bar{W}^-(t), t \in L. \quad (3)$$

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ACCESSION NR: AR5009892

The following restrictions are imposed: the curves  $\gamma_i$  have curvature satisfying the Hölder condition;  $G$ ,  $g$ , and the derivatives of  $a$  and  $b$  satisfy the Hölder condition;  $a$  and  $G$  do not tend towards zero. It is proven that if, in addition,

$$|a(t)| > |b(t)|$$

then in relation to the number of linearly independent solutions and conditions of solvability, the problem (1) - (3) behaves in the same way as the Hilbert boundary value problem (2) for analytic functions with index

$$x = \text{Ind } G(t) + \text{Ind } a(t).$$

The method of solution consists of introducing a new function which satisfies the Beltrami differential equation in  $D^-$ , and for which the boundary condition (3) reduces the condition of continuous extension. The results are used to calculate the number of solutions to problems on infinitely small and finite deformation of surfaces. F. Gakhov.

SUB CODE: MA

ENCL: 00

KC  
Card 2/2

BARKHIN, I.V., podpolkovnik med. sluzhby.

Treatment of nocturnal enuresis. Voen.-med. zhur, no.12:85 D '55  
(MIRA 12:1)  
(URINE--INCONTINENCE)

BARKHIN, Mikhail Grigor'yevich.

Military-Engineering Red Banner Academy imeni Kuybyshev. Academic degree of Doctor of Architecture, based on his defense, 17 June 1954, in the Council of the Moscow Architectural Inst, of his dissertation entitled: "Bases of Architectural-Building Designing." (Textbook)

Academic degree and/or title: Doctor of Sciences

SO: Decisions of VAK, List no. 13, 4 June 55, Byulleten' MVO SSSR, No. 15, Aug 56, Moscow, pp. 5-24, Uncl. JPRS/NY-537

BARKHMAN, L.I.

Manufacturing deep drilling equipment. Neft. khoz. 40 no.6:  
23-30 Je '62. (MIRA 15:6)  
(Oil well drilling--Equipment and supplies)

BARKHUDARIAN, S.S.

Recent data on the physiological mechanism of disinhibition during  
the interaction of different types of internal inhibition. Izv. AN  
Azerb. SSR. Ser. i med. nauk no. 5:125-132 '61. (MIA 14:8)  
(INHIBITION)

TORGOMYAN, N.G., kand. tekhn. nauk; CHILENGARYAN, L.A., kand. tekhn. nauk; SNAKHBAZYAN, Sh.A., kand. tekhn. nauk; AGAHMANYAN, G.A., kand. sel'khoz. nauk; KULOYAN, L.T., kand. tekhn. nauk; ARSHAKYAN, D.T.; BARNUDARIAN, I.G.; SARKISYAN, S.G., kand. tekhn. nauk; MKHITARYAN, S.A.; OSEYAN, A.M., doktor ekon. nauk, prof.; BER-NAMARCHEV, B.I., kand. geogr. nauk, red.; AYVAZ'YAN, V.G., otv. red.; FNL'DMAN, M.P., otv. red.; AVETISYAN, A.A., tekhn. red.; CHARHALYAN, TS.P., tekhn. red.

[Results of the combined studies of the Sevan problem.] Rezul'taty kompleksnykh issledovanii po Sevanskoi probleme. Erevan, Izd-vo Akad. nauk Armenian SSR. Vol.2. [Water resources and power engineering] Vodnoe khoziaistvo i energetika. 1962. 330 p.  
(MIRA 15:11)

1. Akademiya nauk Armyanskoy SS.R, Eriwan. Institut vodnykh problem.

(Sevan Lake region--Water resources development)

(Sevan Lake region--Power engineering)

ASKEROV, M.I.; BARKHUDAROV, A.I.; MATVEYEV, V.I., redaktor.

[Safe working conditions in oil industries; practice of the First  
Industry of the Trust "Artemneft'" in combating industrial trauma]  
Za bezopasniu rabotu na neftianykh promyslakh; opyñ bor'by s proiz-  
vodstvennym travmatizmom na l-oem promysle tresta Artemneft'. Baku,  
Gos.nauchno-tekhn.izd-vo neftianoi i gorno-toplivnoi lit-ry, Azer-  
baidzhanskoe otd-nie, 1953. 18 p. (MIRA 8:4)  
(Petroleum industry--Safety measures)

KOSTIN, R.A., inst.; SHPILEVOY, A.I.; BARKHUDAROV, A.I.

Safe repair of oil wells from the derricks with the help of a tractor-mounted hoist Bezop. truda v prom. 5 no.8:21-22 ap '61.

(MIRA 14:8)

I. Vsesoyuznyj nauchno-issledovatel'skiy institut po tekhnike bezopasnosti v neftyanoy promyshlennosti, g. Baku.

(Oil wells--Equipment and supplies--Repairing)

ANTONOVA, R.A.; BARKHUDAROV, E.M.; ZHVANIYA, B.P.; ROETOMASNIVILI, G.I.;  
TSINTSADZE, N.L.

Interaction of shock waves. Zhur. tekhn. fiz. 33 no.9:1137-  
1138 S '63.  
(MIRA 16:11)

SHVELIDZE, T.V.; BARKHUDAROVA, I.S.

Coefficient of flow fluctuation for large rivers in the Georgian  
S.S.R. and the Northern Caucasus and its change in dependence on  
the calculated outflow. Trudy Inst.energ.AN Gruz.SSR 16:13-30  
'62.  
(Georgia--Rivers) (Caucasus, Northern--Rivers)  
(MIRA 16:4)

L 64113-65 EWP(a)/ENT(m)/EWP(i) WH

ACCESSION NR: AP5021096

UR/0056/65/049/002/0386/0388

AUTHOR: Barkhudarova, T. M.; Voronov, G. S.; Gorbunkov, V. M.; Delone, N. B.

TITLE: Spatial distribution of the electrical field set up by a focused ruby laser beam

SOURCE: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 49, no. 2, 1965,  
386-388

TOPIC TAGS: ruby laser, laser field, field distribution, spatial distribution, focused laser, laser output

ABSTRACT: The spatial distribution of the electric field set up by a Q-switched, pulsed ruby laser was investigated. The laser consisted of standard ruby crystals 120 mm long and 10 mm in diameter. A spiral IFK-15000 lamp and a Kerr cell were used for pumping and Q-switching, respectively. The laser pulse power output was from several MW to several tens of MW. The beam was focused by lenses with  $f = 45$  and 120 mm which were corrected for spherical aberration for  $\lambda = 6943 \text{ \AA}$ . The field distribution was studied photographically, and in the photometric measurements neutral attenuating filters were used. It was shown that the minimum transverse cross section of the focused beam is of the order of several microns and corresponds to

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ACCESSION NR: AP5021096

2

the diffraction-distributed beam from individual spots which exist in a nonfocused beam at the input lens. The superposition of the individual diffraction patterns generates interference which, in turn, is responsible for a fine structure in the distribution of the focused beam. The results indicate that although by reducing  $f$  and increasing the distance between the lens and the laser, higher intensity electrical fields can be attained, the process is limited by the relative aperture of the focusing lens. Further improvement of the field intensity can be achieved by reducing the number of resonator modes. Orig. art. has: 2 figures. [YK]

ASSOCIATION: Fizicheskiy institut im. P. N. Lebedeva Akademii nauk SSSR (Physics Institute, Academy of Sciences, SSSR) 44

SUBMITTED: 24Feb65

ENCL: 00

SUB CODE: EC

NO REF Sov: 002

OTHER: 001

ATD PRESS: 4070

Card 2/2

BARKHUDAREVA, T. S.  
USSR/Biology - Physiology

Card 1/1      Pub 33-13/18

FD-2282

Author : Barkhudareva, T. S.  
Title : Towards a method of plethysmography (a modification of the plethysmograph)  
Periodical : Fiziol. zhur. 40, 606-607, Sep-Oct 1954  
Abstract : Describes two models of a plethysmograph, one to be used on the inner surface of the thigh of a dog and the other to be used on the inner surface of the wrist and forearm of man. Diagrams. Plethysmograms.  
Institution: Institute of Physiology imeni I. P. Pavlov of the Academy of Sciences of the USSR, Leningrad  
Submitted : May 31, 1954

Pushkin, L. .

Pushkin, L. .: "Molecular and viral conditions of protein folding correction". - Minsk, 1985. - 200 p. (Candidate of Physiobiology Iuri I. P. Pavlov. (Dissertation for the degree of Candidate of Medical Sciences)

©: Издательство Ученых №. 51, 1985 год.

AUTHORS: Klabundzija, A. L., Sogaryan, A. G., Barkhudaryan, A. J. SOY/79-28-12-23, 01

TITLE: Telomerization of Chloroprene in the Reaction With 1,3-Dihydro-Butene-2 Under the Action of  $\text{FeCl}_3$ . IV (Telomerizatsiya khloroprena pri vysokodeystvii s 1,3-dikhlorbutenom-2 pod vlipaniyem  $\text{FeCl}_3$ . IV)

PERIODICAL: Zhurnal obshchey khimii. 1978, Vol 58, No 12, pp 3255 - 3258 (USSR)

ABSTRACT. According to references 1 and 2 the activity of chloroprene in telomerization reactions under the action of ion catalysts is lower than in other diolefins. This property contradicts the comparatively higher reactivity of chloroprene in the radical polymerization, the velocity of which is higher by 700 times than that of isoprene if the process is carried out in a homogeneous way. To determine the effect of the ratio between 1,3-dihydro-butene-2 (I) and chloroprene (II) in the presence of  $\text{FeCl}_3$  upon the molecular weight of the forming telomers the authors carried out the telomerization within the wide range of the molar ratio (I) : (II) of from 1/1 to 1/500, which is

Card 1/1

Telomerization of Chloroprene in the Reaction With  
1,3-Dichloro-Butene-2 Under the Action of  $\text{FeCl}_3$ . IV

SOV/70-10-70-101

of theoretical and practical interest. In the chloroprene rectification product and especially in the raw product there are impurities of bischloride and  $\text{FeCl}_3$ , contained which cause the formation of low-molecular polymers in the rectification and even on 1 over standing. These impurities coming from the material of the apparatus used change the molecular weight and plasticity of the polymers formed from chloroprene. In the emulsion polymerization these impurities do not exert any influence as the iron chloride is hydrolyzed and becomes inactive (see results on all this given in table 1 and in figures 1-3). By investigation of the polymers obtained the authors proved that 1,3-dichlorobutene-2 is a component of all polymers. Its quantities decrease with decrease of its molecular ratio to chloroprene; the mean molecular weight of the polymers increases accordingly. A sufficiently high confluence of the molecular weights was found, which were determined cryoscopically and viscometrically according to the chlorine to be significant. This is proof of the telomerization scheme suggested on the action of  $\text{FeCl}_3$ .

Card 2/3

Telomerization of Chloroprene in the Reaction With  
1,3-Dichloro-Butene-2 Under the Action of  $\text{FeCl}_3$ . IV

307/73-26-12-20/1

There are 4 figures, 2 tables, and 2 references, 1 of  
which is Soviet.

ASSOCIATION: Yerevanskiy politekhnicheskiy institut im. Karla Marks'a  
(Yerevan Polytechnic Institute imeni Karl Marks)

SUBMITTED: October 12, 1957

Card 3/3

ARSHAKYAN, D., inzh. BARKHUDARYAN, I., inzh.

Improve heat engineering in Armenian industrial enterprises.  
Prom.Arm. 4 no.2:21-22 F '61. (MIRA 14:6)  
(Armenia--Heat engineering)

BARKHUDARYAN, I.G.

Use of mathematical methods in treating the operational  
characteristics of gas consumption. Izv. AN Arm. SSR. Ser.  
tekhn. nauk 18 no.3:16-24 '65.  
(MIRA 16:8)

BARKHUDARYAN, I.G.

Disproportionality of gas consumption by various branches of  
industry. Gaz. delo no.9;37-41 '63. (MIRA 17;12)

1. Institut energetiki AN ArmSSR.

BALASANYAN, S.P.; BARKHUDARYAN, I.G.

Building underground reservoirs for natural gas in Armenia.  
Gaz delo no.9:46-49 '63. (MIRA 17:12)

1. Institut energetiki AN ArmSSR.

L 27938-66

ACC NR: AP6017734

SOURCE CODE: UR/0173/65/018/003/0016/0024

AUTHOR: Barkhudaryan, I. G.

ORG: ArmNIE

TITLE: Question of usage of mathematical methods of processing operating  
condition characteristics for gas usageSOURCE: AN ArmSSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, v. 18, no. 3,  
1965, 16-24TOPIC TAGS: natural gas, fuel storage, random process, mathematic method,  
statistic analysis

ABSTRACT: Due to the irregularity of industrial demands for natural gas and the shortage of gas storage areas, it has become necessary in the Soviet Union for many heat and power stations in large industrial centers of the Soviet Union to use the discarded natural gas formed as a result of uneven gas requirements in the economy as fuel. Consequently, regulation of the operating condition of the power system requires study of the regime of gas usage in the national economy. The author of this article has made an attempt to use statistical processing methods, representing the daily gas usage as a statistical series of random discreet numbers. Data from three industrial centers in the European portion of the USSR and in the Caucasus were used. Areas with different climatic conditions were used. A very simple curve comparing gas arriving by pipe lines from production points with gas usage requirements is presented. Orig. art. has: 2 tables and 5 drawings. [JPRS]

SUB CODE: 12, 21 / SUBM DATE: 07Jul64 / ORIG REF: 005  
Card 1/1 B1G

BALASANYAN, S. P., BARKHUDARYAN, I. G.

Underground storage of natural gas in Armenia. Gaz. prov. 3  
no. 1346-49 '64. (MERA 17/12)

BARKHUDARYAN, A.A.

USSR/Human and Animal Physiology - Blood Diseases.

Abstr Jour : Ref Zhur - Med., No 10, 1953, 45995

Author : Barkisyan, A.A., Dadalyan, S.S., Barkhudaryan, L.B.,

Inst : Yerevan Institute of Medicine.

Title : Effects of Medicamental Sleep Upon Experimental Hemolytic Anemia.

Orig Pub : Tr. Yerevansk. med. in-ta, 1953, vyp. 3, 53-56.

Abstract : In tests performed on 25 rabbits, hemolytic anemia was induced by administering 1-4 ml of a 1 percent phenyllydrazine solution, repeated 5 times during a 10-day period. Sugar (I) quantity rose by 17 mg percent, and cholesterol (II) quantity by 16 mg percent; clot retraction (CR) increased by 1.5 mm, and clot disruption capacity (CAC) by 3 mm. Hb amounts reached 33 percent, and the number of erythrocytes (E) decreased to 2,900,000 per

Card 1/2

- 41 -

BARKHUDARYAN, L.Kh., mladshiy nauchnyy sotrudnik

Changes in the quantity of sugar and lactic acid in the blood  
of irradiated rabbits following acute blood loss. Vop.rent.i  
onk. 6:217-220 '61. (MIRA 16:2)  
(BLOOD—EXAMINATION) (BLOODLETTING) (RADIATION SICKNESS)

1

MOVSESYAN, M. A. - (See also: MOVSESYAN, G. V.)  
Ministry of Agriculture, Armenia

Changes in the quantity of meat and animal fat consumed by animals in rural areas estimated to be 30% higher than in 1970.

Source: [unclear]

"APPROVED FOR RELEASE: 06/08/2000

CIA-RDP86-00513R000203620018-9

RABUDARYAN, L.V.

Affectionate regards to the family. I am still  
suffering from some refitting of things that were broken  
in the range. Very kind. I will take care of myself.

APPROVED FOR RELEASE: 06/08/2000

CIA-RDP86-00513R000203620018-9"

BARKHUDARYAN, V.G., Cand Chem Sci -- (diss) "Study of process  
of polycondensation of 1,3-dichloro-<sup>2</sup>-butane and its reactions  
with diol<sup>E,N</sup>s under the influence of Fridel'-Krafts  
cataly<sup>E</sup>rs." Len 1958, 15 pp (Len Order of Lenin State Univ  
im A.A. Zhdanov) 150 copies (KL, 32-58, 106)

- 4 -

AUTHORS: Klebanskiy, A. L., Sayadyan, A. G., Barkhudaryan, "a." 79 28 3-1/61

TITLE: Investigation of the Polycondensation Mechanism of 1,3-Dichlorobutene-2 Under Action of Friedel - Krafts-Gustavson Catalysts I (Izuchenie mekhanizma polikondensatsii 1,3-dikhlorbutena-2 pod vliyaniem katalizatorov Fridelya-Kraftsa-Gustavsona I)

PERIODICAL: Zhurnal Obshchey Khimii, 1958, Vol. 28, Nr 3, pp. 569-574 (USSR)

ABSTRACT: The polycondensation of 1,3-dichlorobutene-2 under action of Friedel - Krafts - Gustavson catalysts was announced by the authors already earlier (ref.1). Other references are lacking. The polymers of these compounds are, however, of interest as they are film-forming substances. Besides, this polycondensation models to a high degree the vulcanization process of polychloroprene ( $\text{CH}_2=\text{CH}-\text{CCl}=\text{CH}_2$ ) under the action of metal oxides. The polycondensation of 1,3-dichlorobutene-2 was carried out by the authors in the presence of  $\text{AlCl}_3$ ,  $\text{FeCl}_3$ ,  $\text{ZnCl}_2$  and  $\text{SnCl}_4$ . In all cases low-molecular and resinous products are observed. the polycondensation

Card 1/3

Investigation of the Polycondensation Mechanism of 1,3-Dichlorobutene-2 Under Action of Friedel-Krafts-Gutmann Catalysts I

process taking place most clearly mainly under the formation of high-molecular polymers when  $\text{AlCl}_3$  is used. The reaction with  $\text{FeCl}_3$  takes place slowly, which makes it possible to isolate the primary low-molecular polymers. Dimers as well as low-molecular polymers were separated. In investigation the composition and structure of low-molecular compounds the dimer  $\text{C}_{8}\text{H}_{12}\text{Cl}_4$  and the product  $\text{C}_{8}\text{H}_{11}\text{Cl}_3$  were found. The increased mobility of the chlorine atom increases the capability of forming the complex  $\text{CH}_2\text{CCl}=\text{CH}-\text{CH}_2^+\cdot\text{FeCl}_4^-$  under the influence of the said catalysts.- This complex is bound to dichlorobutene according to scheme 1. The obtained dimer 2,6,6-trichloro-5-chloromethylheptene-2 has the structure (II) which was supported by epoxidation, as in the products of decomposition of acetic acid (80% of the theoretical yield)  $\beta$ -chloromethyl- $\gamma$ -dichlorovaleric acid (62,9%) and hydrochloric acid (91%) were found. The formation of the above mentioned  $\text{C}_{8}\text{H}_{11}\text{Cl}_3$  side product is tentatively explained by scheme 2. In the reaction process

Card 2/3

Investigation of the Polycondensation Mechanism of 1,3-  
-Dichlorobutene-2 Under Action of Friedel-Krafts-Gustavson  
Catalysts I

79-28-3-1/61

therefore a binding of two molecules 1,3-dichlorobutene-2 exists under the formation of 2,6,6-trichloro-hechloromethyl-heptene-2; from this hydrogen chloride is split off under the formation of 2,6-dichloro-5-chloromethylheptadiene-2,5. At the same time polymers of high molecular weight are formed the composition of which confirms the proposed polycondensation scheme. A vulcanisation process of polychloroprene with metal oxides by condensation was suggested, which takes place under the action of the metal chlorides forming in it. There are 5 references, 3 of which are Soviet.

SUBMITTED: March 5, 1957

Card 8/3

AUTHORS: Kiebanskiy A. L., Sayadyan A. G., Parkhodarjan,  
M. J. 79-28-5-2/61

TITLE: The Reaction of 1,3-Dichlorobutene-2 With Chloroprene Under  
the Action of Friedel - Krafts - Gustavson Catalysts. II  
(Vzaimodeystviye 1,3-dikhlorbutena-2 s khloroprenom pod  
vliyaniiem katalizatorov Fridelya - Kraftsa - Gustavsona. II)

PERIODICAL: Zhurnal Obshchey Khimii. 1958, Vol. 28, Nr. 3, pp. 574-578  
(USSR)

ABSTRACT. In connection with the investigations carried out by one of  
the authors on the synthesis of compounds modelling the basic  
structural types of synthetic rubber with regard to their  
different reactivity, also the reaction of crotyl chlorides  
of different structure with chloroprene, isoprene and divinyl  
were investigated. Here the results of the reaction of 1,3-  
-dichlorobutene-2 with chloroprene in the presence of the  
catalysts  $\text{AlCl}_3$  and  $\text{FeCl}_3$  are given. In both cases low-molecular  
and resinous products were observed. When using  $\text{AlCl}_3$  the  
yield of the binding product (1 mol. to 1 mol.) was very  
small. With an increase of the concentration of the catalyst  
Card 1/3

The Reaction of 1,3-Dichlorobutene-2 With Chloroprene Under the  $\eta$ -28.3-2/61 Action of Friedel - Crafts - Gustavson Catalysts. II

mainly the formation of high-molecular compounds is taking place which makes more difficult the isolation of low-molecular compounds. The ratio between the initial products exercised great influence on the final products, the yield of the primary binding product increasing with the increase of the excess of 1,2-dichlorobutene-2. As results of the reaction of 1,3-dichlorobutene-2 with chloroprene as primary product the formation of six compounds can be expected (see formulae (I),(II),(III),(IV),(V),(VI)). Their structure was proved by ozonization, as in the products of decomposition acetic acid, chloroacetic acid and succinic acid (75.6% - 80.3% and 81.09%) were found. It must be assumed that in this reaction the step-by-step condensation takes place as follows: First the compound  $\text{CH}_3\text{CCl}=\text{CHCH}_2\text{CCl}=\text{CHCH}_2\text{Cl}$ , then  $\text{CH}_3\text{CCl}=\text{CHCH}_2(\text{CH}_2\text{CCl}=\text{CHCH}_2)_2\text{Cl}$ , then  $\text{CH}_3\text{CCl}=\text{CHCH}_2(\text{CHCCl}=\text{CHCH}_2)_3\text{Cl}$ , etc. Such reactions are described in publications as "telomerization".

Card 2/3  
Thus it was shown that in the presence of the two catalysts 1,3-dichlorobutene-2 combines with chloroprene in the position